



Iridium Aviation Services Overview & Roadmap

Cross Polar Trans-East ATM Providers' Working Group (CPWG)

12 December 2012

Chicago, Il



RELIABLE • CRITICAL • LIFELINES

Iridium Communications Overview

A vital, global communications provider of mobile voice and data services via 66 in-orbit satellites

- Serving 595,000 customers across the land-based handset, maritime, aviation, machine-to-machine (M2M) and government markets
- Anchor U.S. DoD customer represents 21% of revenue⁽¹⁾
- LTM net income of \$56 million, revenue of \$386 million and Operational EBITDA (OEBITDA) of \$198 million
- 2007-2011 service revenue and OEBITDA CAGRs of 15% and 24%



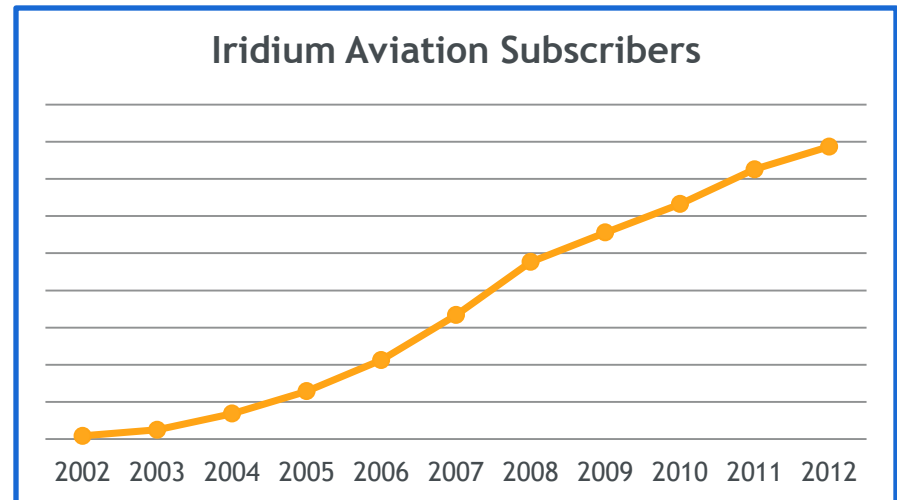
(1) For the LTM period ended 9/30/12. Includes direct and indirect DoD revenue and revenue from certain other governmental entities through the DoD gateway.



Iridium Aviation Market Growth



- Iridium continues to rapidly grow aviation subscribers
- Annual subscriber growth rate of 15% since 2008
- Continued growth across all aviation market segments, especially air transport
- More than 30 airlines contracted to use Iridium for aircraft communications



Iridium Technical Advantages

The Iridium satellite network's unique attributes provide superior customer benefits

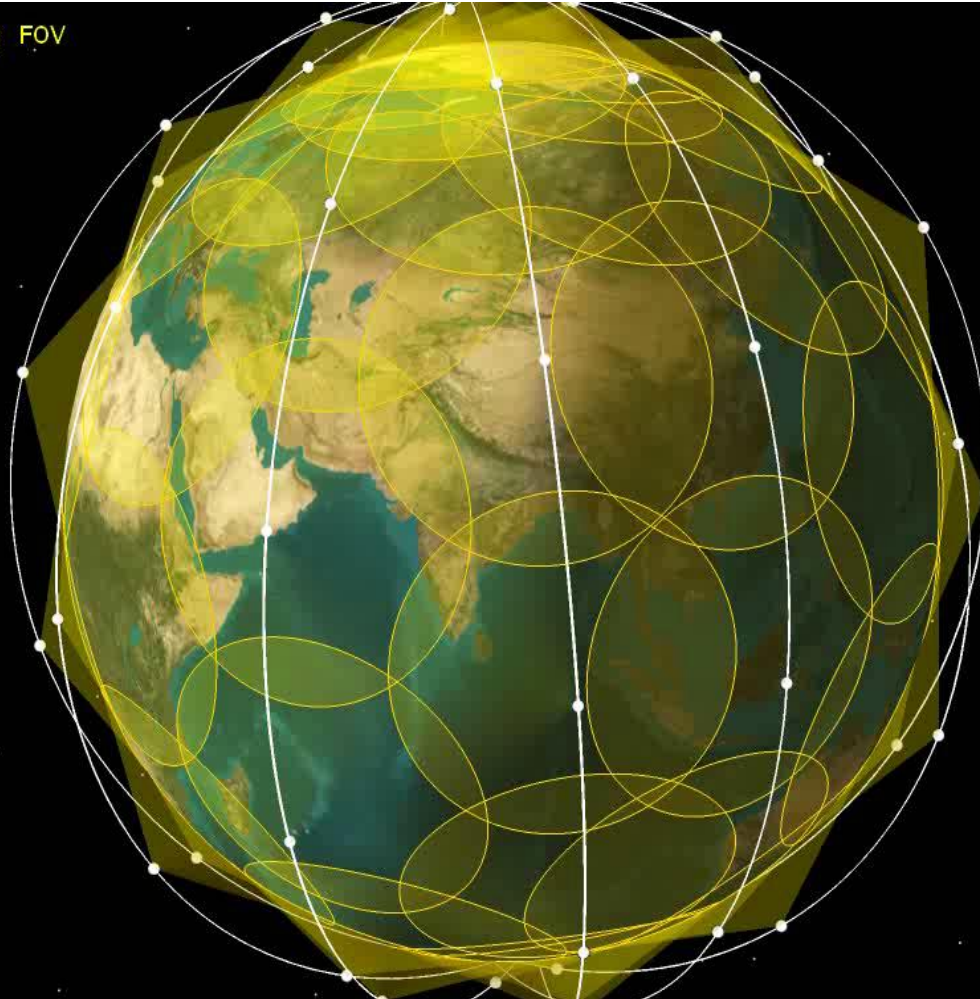
- **LEO Advantages** - A unique LEO constellation sets it apart from MEO and GEO systems - shorter distance to satellites results in smaller antennas and lower latency performance
- **Cross-Link Architecture** - Cross-linked and overlapping “mesh” architecture delivers superior availability, efficiency, flexibility and reliability
- **Global Footprint** - Polar orbit constellation with inter-satellite links provides fully global coverage
- **Service Continuity** - Full backward compatibility from next generation constellation enables customers to utilize services beyond 2030, without antenna or hardware modification



“Iridium Everywhere”

Satellite footprints overlap, providing 100% global coverage

66 Sensors with 62deg FOV



Network Leadership Fuels Global Usage

Diverse network traffic with significant growth opportunities



○ M2M (SBD) Data Transmission

● Voice Call

● Iridium OpenPort® High-Speed Data Traffic

Note: One week plot of M2M/SBD session, voice call and Iridium OpenPort broadband data origination points for the week of 9/30/12 to 10/06/12 (commercial traffic only)





IRIDIUM AVIATION SAFETY SERVICES

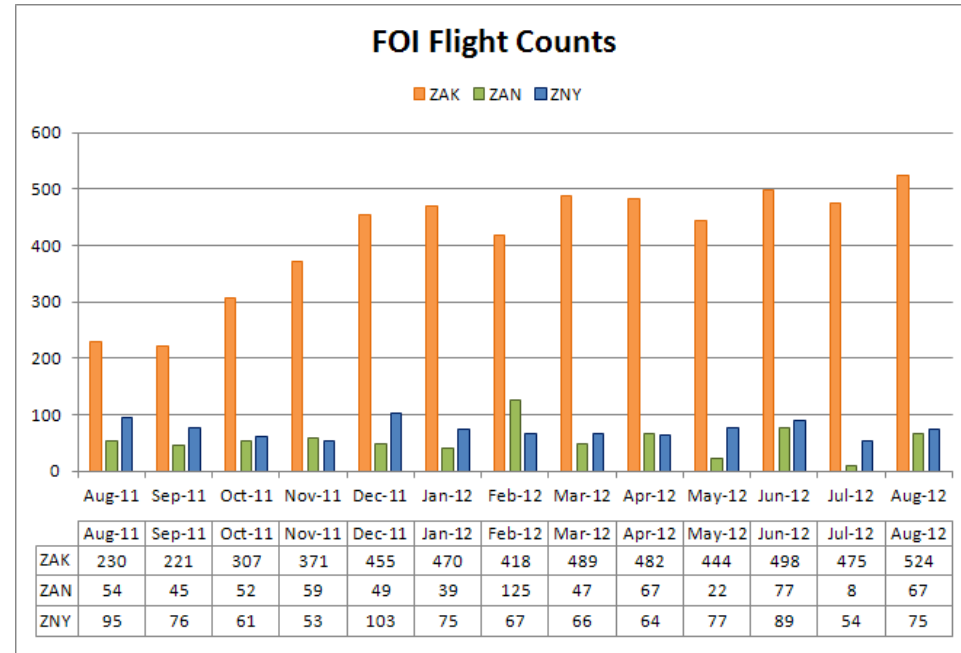
Iridium Short-Burst Data (SBD) Service

- Iridium Short-Burst Data (SBD) service is optimal for ACARS communications
 - Provides high-availability, low latency two-way data communications
 - Meets GOLD RCP240 latency and availability performance metrics for safety communications
 - Authorized by the FAA and ICAO for CPDLC communications
- Provides fully global coverage supporting optimized Polar routing and communications
- Enhanced for aviation users by providing message prioritization



FANS Over Iridium (FOI) Service

- Aircraft operators continue to adopt Iridium for AMS(R)S communications
 - More than 100 aircraft equipped using FOI
 - Pipeline of more than 1000 aircraft to equip with Iridium for AMS(R)S use by 2015
- Currently in use throughout the globe including the NAT and Pacific FIRs
- Only AMS(R)S service to provide polar coverage



Iridium SATCOM Voice Platform

- Iridium has built an enhanced calling platform compliant with the ICAO SATCOM Voice Task Force guidance material
 - Supports priority, preemption and caller ID for cockpit communications
- Unique SIM cards are required to use the ATS voice platform
 - Distribution and use is restricted to aircraft that intend to use Iridium for ATS voice communications
- Fully redundant, high availability platform
- Will be participating in FAA operational evaluation coordinated through the PARC CWG





IRIDIUM NEXT

Iridium NEXT

- Fully replaces the current constellation of 66 LEO satellite
- Modernized ground earth stations with new features and capabilities
- Will include 6 in-orbit spares and 9 ground spares
- Scheduled deployment between early 2015 and 2017
- Eight launches using SpaceX Falcon 9 and ISC Kosmotras rockets
- Significant advantages
 - Increased network capacity
 - Higher data speed capabilities
- Fully backward compatible



Schedule Highlights

- Completed Preliminary Design Reviews (PDRs) have established a solid foundation for transition to detailed design phase of the program
 - Bus, Payload & Space Segment PDRs have all been completed
- The road ahead:
 - **2012:** Detailed hardware and software design, culminating in the Space Segment Critical Design Review (CDR) in Q1 2013
 - **2013:** Initial Space and launch vehicle hardware production and extensive performance testing
 - **2014:** Satellite and launcher/dispenser qualification testing and the initiation of satellite production in preparation for the first launch
 - **2015:** Initiate launching and integrating the NEXT SVs into the Iridium constellation; increase SV production rate
 - **2016:** Continue launching and integrating the NEXT SVs
 - **2017:** Complete the constellation deployment



SPACE-BASED ADS-B

What is **Aireon**SM ?


- Aireon LLC is JV between Iridium Communications Inc. and NAV CANADA
 - The U.S. FAA, Harris Corporation and ITT Exelis are supporting this transformative venture with strategic and technical expertise
- Aireon will leverage the Iridium NEXT constellation to deploy a fully global surveillance service using ADS-B technology for Air Navigation Service Providers (ANSPs) around the globe
- Will enable air traffic management agencies to continuously track ADS-B equipped aircraft anywhere in the world, with the goal of increased operational efficiencies, fuel savings and more efficient use of air space
- Designed to be a platform for innovation and growth for the global aviation industry



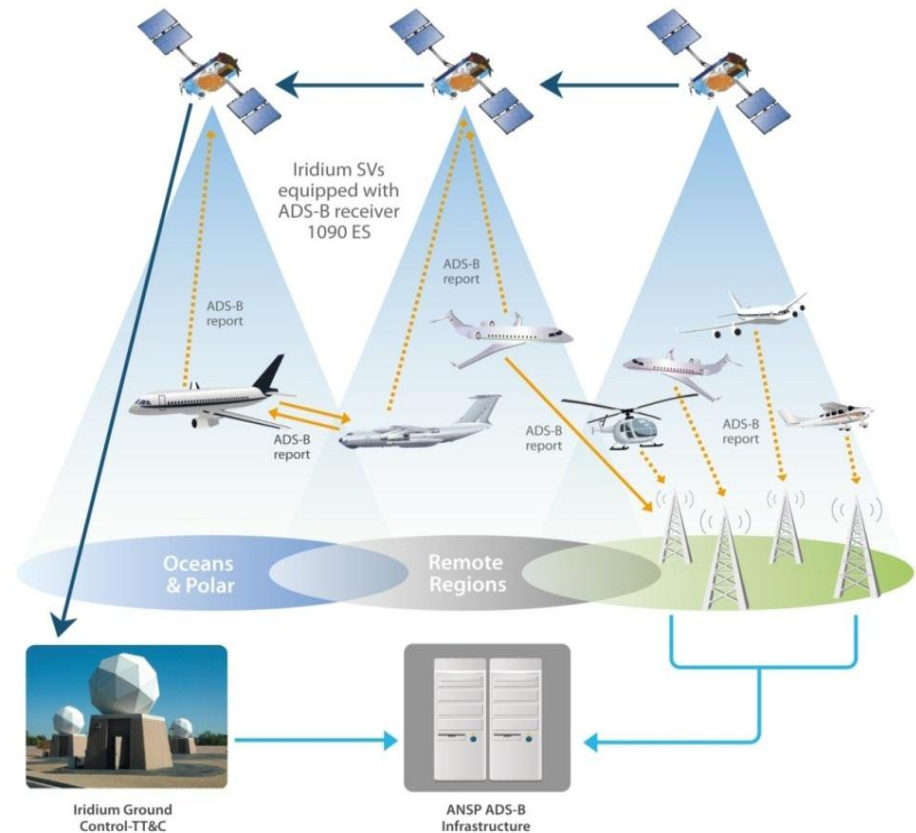
Federal Aviation
Administration



Global ADS-B Surveillance

 **Aireon**SM will provide fully global ADS-B coverage by installing a space-based ADS-B receiver on each Iridium NEXT satellite

- ADS-B hosted payload will receive aircraft ADS-B transmission and deliver information to ANSPs in near real-time
 - Aireon hosted payload will support 1090 ES (Extended Squitter) ADS-B transmissions
- Teaming with commercial partners Harris and ITT Exelis to develop payload and perform system engineering for ANSP integration
- Aireon will distribute the ADS-B information to ANSPs around the globe

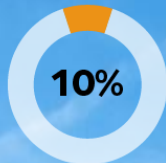


Aireon Provides a Transformative Solution

- Giant leaps in efficiency, which contribute to safer skies
 - Continuous global surveillance to allow ANSPs to enable improved aircraft separation in all airspace
 - Aireon has the potential to close the safety and efficiency gap between developed and developing nations, and allow ALL nations to support advanced air traffic management systems at a fraction of current costs and infrastructure requirements



**Estimated current
global surveillance coverage**



Global surveillance
coverage before
Aireon

Estimation based on Iridium commissioned independent studies



Aireon global coverage



Global surveillance
coverage after
Aireon



What Will Aireon Do?

Global Control

Will provide air traffic controllers with accurate, near real-time visibility of ADS-B equipped aircraft in any skies worldwide.

Global Coverage

Will extend ADS-B capabilities beyond commonly used terrestrial airways to ocean, polar, remote and vast underdeveloped regions without radar systems, everywhere on the planet.

Global Optimization

Will deliver a cost-efficient solution to enable the optimization of flight paths and altitudes, increasing efficiency and fuel economy, and reducing delays and congestion.

Global Safety

Will enable accurate, near real-time display of air traffic in any flight path improves safety around the world.

AireonSM opens the skies



Estimated current global surveillance coverage



AireonSM global coverage

*Estimation based on Iridium-commissioned independent studies.





QUESTIONS?